



NEW ENGLAND
ENVIRONMENTAL
CHALLENGES
2001

www.epa.gov/region1

Introduction

Since 1995, EPA's New England Office has published an annual "State of the Environment" report on environmental conditions in the region and the agency's strategies for improving those conditions. This year's report focuses on the ways our work is affecting real people and real neighborhoods across New England. In it, we aim to provide a living picture of the environmental challenges the region is facing and our unique partnerships with the residents, communities and businesses with whom we work to meet those challenges.

In this "New England Environmental Challenges 2001" report, we provide an intimate look at 13 of the region's more pressing environmental threats—issues ranging from urban decay and childhood lead poisoning to contaminated drinking water and global warming. We look at these issues through the eyes of individuals who are living these problems first-hand and are battling—with EPA's support—to make them go away.

You will read how a Boston grandmother is fighting the scourge of lead poisoning on her street and how a Vermont pond watcher is doing her part to curb runoff pollution at her local pond. You will follow the lives of citizen activists in Bridgeport and Hartford battling to revitalize their old urban neighborhoods.

These and other stories are shining examples of the many individuals and groups in New England whose creative perspectives are steering EPA to environmental solutions that are smarter and more cost-effective. We are profoundly grateful for the dedication of these and other citizens who are making New England a better and safer place.

This report reflects the agency's obvious and long-held commitment to clean and healthy water, clean and healthy air, healthy communities and healthy ecosystems. We are committed to achieving these four goals and to a new system of accountability to measure our progress toward achieving them. Rather than measuring progress by the number of facilities we inspect or the number of violators we take to court, we are asking ourselves, "Is our air cleaner, our water healthier and our land safer?" With clean water as a goal, for example, we are measuring the number of streams, lakes and ponds in New England that are meeting water quality standards and targeting our actions to improve those numbers.

This report does not try to capture all of the work we are doing, nor our many successes—among those, the Boston Harbor cleanup, redevelopment of the Raymark Superfund site and forcing General Electric to remove PCBs from the Housatonic River. But the report does provide snapshots of how a federal agency can improve individual communities and lives.

In publishing this report, we owe a debt of gratitude to Mindy S. Lubber, whose five-year tenure at the agency, the last year as regional administrator, ended in January. Lubber's passionate commitment to neighborhood-based environmental advocacy and public health protection for all New Englanders was an inspiration to everyone working at and with EPA New England.

We invite you to look at the environmental challenges we have presented and consider the many ways that individuals and neighborhoods are playing significant roles in addressing environmental and health threats. We can't solve all of our environmental problems today, but with help from people like those in this report—and from people like you—we can make it safer and more enjoyable for all of us and for future generations.

Reducing Lead Exposure • Dorchester, Massachusetts



When Elnora Thompson bought her house in Dorchester in 1990, the city of Boston sent a team to remove lead paint from her interior walls.

Unfortunately, when her two young granddaughters were tested for lead in their blood, the levels were unacceptably high, threatening them with future developmental problems.

“For ages, I washed the entire inside of the house every week—walls, woodwork, floors,” Thompson said. “Then the city tested the soil outside. Close to the foundation there were enormous levels of lead.”

Thompson, an avid gardener, was devastated when her doctor told her she had to stop gardening and that her grandchildren couldn’t play on her large urban plot anymore.

Fortunately, her home was chosen for Boston’s Lead Safe Yards project. Her yard was among 50 targeted for cleanup under the EPA-funded pilot project that is part of a larger effort to reduce lead exposure all across the country.

The Boston Lead Safe Yard team inspected Thompson’s yard with hand-held sensors and then had workers cover the most contaminated soil with rocks, gravel and an above-ground deck. Soon, Thompson was allowed to plant flowers in a raised garden bed constructed in a less contaminated area further from the house.

“I planted tulips, irises and other bulbs for next year,” Thompson said. “I love it and am so thankful this was possible.”

More importantly, her grandchildren’s lead levels have dropped to acceptable standards.

Lead Safe Yards, the project that helped Thompson, is being used as a model for lead-safe yard programs all across the country. A dozen New England cities have already received training on the program and Rhode Island recently received \$250,000 from EPA to apply the project to outdoor areas at two-dozen daycare centers. Under EPA NE’s leadership, the agency also adopted a policy last year that makes it less expensive for landlords and homeowners to delead their properties. Property owners can now dispose lead demolition debris in standard landfills instead of sending it to more costly hazardous waste landfills.

Lead Safe Yards is a key component of EPA New England’s Children First Initiative. Launched last fall, the campaign is focused on creating healthier environments in the three places where children spend most of their time—at home, in schools and outdoors. Among our priorities is reducing lead exposure, reducing pollution that aggravates asthma and improving air quality in public schools.



Elnora Thompson with her great nephew Dejuan

Preserving Tribal Lands • Meddybemps, Maine

EPA's Superfund team expected to excavate soil, rocks and a variety of hazardous materials at the Eastern Surplus Company Superfund site in Meddybemps, Maine in 1999. What they discovered was a trove of American Indian artifacts and an archaeological site older than Egypt.

Eight thousand years of soil and 50 years of toxic contamination cover the ancient Indian village in the heartland of Passamaquoddy country. EPA's goal of restoring the environment at this former Army surplus site is now coupled with the critical goal of preserving the historical and cultural integrity of this tribal property. The parcel sits on the shores of what was once a hub for a popular canoe travel route connecting coastal areas to the Saint Croix River and other interior regions.

"This is an important site because it is opening up a new book in our history that had been taken away," said Donald Soctomah, Passamaquoddy legislative representative. "The last people to have touched the newly discovered artifacts are members of the Passamaquoddy who lived here 8,000 years ago and the first people to hold the excavated treasures are the Passamaquoddy who live here now."

The five-acre site, named Ntolonapemk ("My Relatives' Place") by Passamaquoddy tribal elders, has been transformed from a polluted eyesore to a monument to the past. Hundreds of stone tools, drills, pottery shards and scrapers typical of early eastern woodland tribes are being collected by archaeologists from the University of Maine in Farmington, while the Abbe Museum in Bar Harbor is acting as custodian for the artifacts.

Cooperation in preserving this landmark and its culture is a testimony to a relationship that can be achieved between Indian groups, federal agencies and the state working together. "Meddybemps is a symbol of new healing, of people and governments working together to save what is important to all of us," Soctomah said.

The Meddybemps project is among many examples of EPA New England's efforts to forge closer relationships with the nine federally recognized tribes in New England. The centerpiece of this effort is our commitment to build the tribes' capacity for administering and managing their natural resources. Many of our collaborations are focused on public health and ecosystem protection.

In addition to the Meddybemps cleanup, EPA is working with the Passamaquoddy and Penobscot tribes to analyze liver tissue in moose and deer for toxics accumulation. We've also formed an Indian Air Work Group that is working with six tribes on a mercury project to determine the health risks from eating fish.

EPA is also assisting the Bureau of Indian Affairs with a collaborative study to evaluate if dioxin, furans and PCBs in the Penobscot River pose public health and environmental risks.



American Indian archaeological site in Meddybemps

Protecting Coastal Communities • Block Island, Rhode Island

For decades, sailboats and powerboats anchored at Block Island's Great Salt Pond routinely emptied their sewage directly into the water.

It's no wonder then that shellfishing wasn't allowed in the harbor, especially in the summer when the island was besieged with boaters.

All this changed in the mid-1990s, when EPA declared Block Island a "No Discharge Zone," a designation that makes it illegal for boaters to discharge sewage into coastal waters. Instead of dumping waste directly into the pond, Block Island boaters must now discharge their waste at official pumpout stations.

Within months after the designation, water quality in the Great Salt Pond improved dramatically. Forty acres of clam beds in the harbor have since reopened.

Last year, Block Island boaters pumped 89,000 gallons of waste into holding tanks—waste that might otherwise have been discharged directly into the water.

"Clammable and swimmable year-round," Block Island harbormaster Larry Constantine says proudly. "All boats have to do is call Channel 73 for pumping services and they get pumped out at no charge. It costs the town a little money, but the outcome—a clean harbor—is well worth it."

Block Island is among many coastal communities in New England using No Discharge Zones to make their waters cleaner. In 1998, Rhode Island became the first state in the country to declare all of its coastal waters—all waters three miles out from the shoreline—a No Discharge Zone. And last summer, all of Buzzards Bay was similarly designated, resulting in a continuous No Discharge Zone from the Rhode Island/Connecticut border to the Elizabeth Islands off Cape Cod. More additions are expected in the coming months.

In the 1970s, wastewater treatment plants and factories were the biggest culprits in our battle against pollution along New England's coastline. Today we are focusing much more of our attention on controlling "nonpoint" pollution sources such as boater waste, stormwater and failing septic systems.

Block Island is one of the many coastal communities where we are waging a multi-pronged effort to fight nonpoint pollution. Named recently by the Nature Conservancy as one of America's "Last Great Places,"

Block Island faces twin challenges of outdated septic systems and high summertime wastewater loads which threaten both drinking water and shellfish areas.

Using a \$1.5 million EPA grant, Block Island is implementing an innovative septic system maintenance program. This includes repairing and upgrading dozens of septic systems and hundreds of septic system tanks.

The island will also implement a new program in which new and existing septic systems are required to meet site-specific treatment standards.



View overlooking Great Salt Pond on Block Island

Reducing Toxics in the Workplace • Cranston, Rhode Island

If chemistry laboratories aren't your cup of tea, don't plan a trip anytime soon to Technic Inc. in Cranston, RI. Technic produces chemical mixes—hundreds of them, actually—used by electroplaters, jewelers and other companies that do precious-metal finishing work. On any given day, the company's laboratories and production facilities create dozens of different chemical baths made from a dizzying array of toxic materials.

Tracking, storing and disposing of these materials is a big responsibility, with the safety of 375 workers and the local environment at stake. So when Wayne Ganim, Technic's director of operations, was contacted by the EPA about an enforcement/compliance assistance initiative focused on his industry, he took notice.

"I told the owners of the company that this was a good thing," said Ganim. "We'd always had a program handling hazardous waste, but it needed tweaking."

As part of the initiative, EPA and state environmental agencies gave Technic and 160 other companies in the industry 10 months to get their waste handling and disposal practices in order. During that time, EPA offered workshops and written materials on such matters as proper labeling of containers, inspection procedures and proper waste disposal. Companies were also encouraged to review whether they were complying with environmental laws and, if not, disclose them to EPA.

Ganim paid close attention to EPA's suggestions and incorporated many of the ideas. By tracking its inventories more closely, the company was able to dispose of 75 containers of old and unusable materials and products—containers that might otherwise still be taking up floor space and posing an environmental threat. "This project helped us to create a more efficient, cleaner and safer operation, especially in our labs," Ganim said.

EPA, in tandem with state environmental agencies in Massachusetts, Connecticut and Rhode Island, followed up its compliance assistance with enforcement inspections. Among the companies inspected was Technic. Ganim said it was gratifying to get a clean slate—so clean, that he won a 25¢ wager with his boss, who thought it impossible to survive an EPA inspection without a fine.



A key component of EPA New England's compliance strategy is integrating enforcement, assistance and pollution prevention in order to get the best environmental results. We're focusing these efforts on specific sectors where violations are pervasive and the environmental benefits would be highest. In addition to the Chemical Industry Audit Project that Technic participated in, we're targeting metal finishers, schools, municipalities and universities.



Technic employee handling molten metal

Tackling Air Toxics • Providence, Rhode Island

When Deborah Wyatt was approached about having air monitoring equipment installed on the roof of the West End Community Center she runs in Providence, she jumped at the chance.

She knows many neighborhood youngsters suffer from asthma and other respiratory problems. And she's often wondered whether the high number of factories and industries in the area contributed to the health problems.

"If hospitals were compiling data on asthma and children with breathing difficulties," said Wyatt, "children in the West End would no doubt figure in with very high incidence rates."

The air monitoring equipment will provide information about metals and other toxic air pollutants in the neighborhood, and help determine steps to reduce their possible health threats.

The sampling effort is the largest of its kind in New England. A \$500,000 EPA grant will enable the R.I. Department of Environmental Management to operate sampling stations at five urban locations—four in Providence and one in East Providence.

The project is part of a larger national EPA effort to better understand the cumulative health impacts of air toxic pollutants on people. A key piece of that effort is the agency's Cumulative Exposure Project (CEP), which uses complex computer models to estimate pollution levels from an array of air toxics in census tracts across the country. Perhaps not surprisingly, the modeling showed that in many urban areas throughout the country, including the Providence area, levels of numerous air pollutants regularly exceed health benchmarks.

For Wyatt, the study provides her with hope that neighborhood kids will miss fewer school days because of breathing difficulties. "Anything that will keep children in school is a good thing," she said.

Improving our understanding of toxic air pollutants is one of many air issues EPA is addressing in New England and across the country. A major success has been reducing summertime smog, or ozone. Since 1983, the number of days when the region had unhealthy smog levels dropped from 90 per year to just 20 last year.

Reducing pollutant emissions from vehicles and power plants is another priority. EPA recently adopted tighter emission standards for all passenger vehicles, including SUVs, minivans and pick-up trucks. These standards will be phased in starting in 2004 and will cut smog-causing pollution from new vehicles by 77 to 95 percent. EPA also adopted new rules for heavy-duty trucks and buses, effective 2006. With the cleaner diesel fuel that will also be required, future vehicles will be 95 percent cleaner.

EPA also moved last year to require coal-fired power plants to substantially reduce mercury emissions. This is a big step forward for New England, where 83 percent of water bodies are subject to fish advisories due to mercury contamination in fish.



Deborah Wyatt and children at the West End Community Center

Protecting Drinking Water • Cape Cod, Massachusetts

Professor Joel Feigenbaum moved to Cape Cod in 1980, looking forward to retiring to the salty fresh air and quiet of the seashore.

No one told him that his solitude would be drowned out by periodic shelling and ordnance booms from a nearby military base. Even worse, no one told him that the Cape's sole source of drinking water was in grave peril from decades of military training activities at the 14,000-acre Massachusetts Military Reservation.

Feigenbaum soon learned the various military activities had contaminated billions of gallons of the Cape's groundwater. "My first walk on the base in the 1980s was like a walk on the moon—barren, bleak terrain—but with piles of disgusting garbage," Feigenbaum recalled. Given the region's exploding growth, and that current water supplies were slated to run short by 2010, it wasn't a situation that could be ignored.

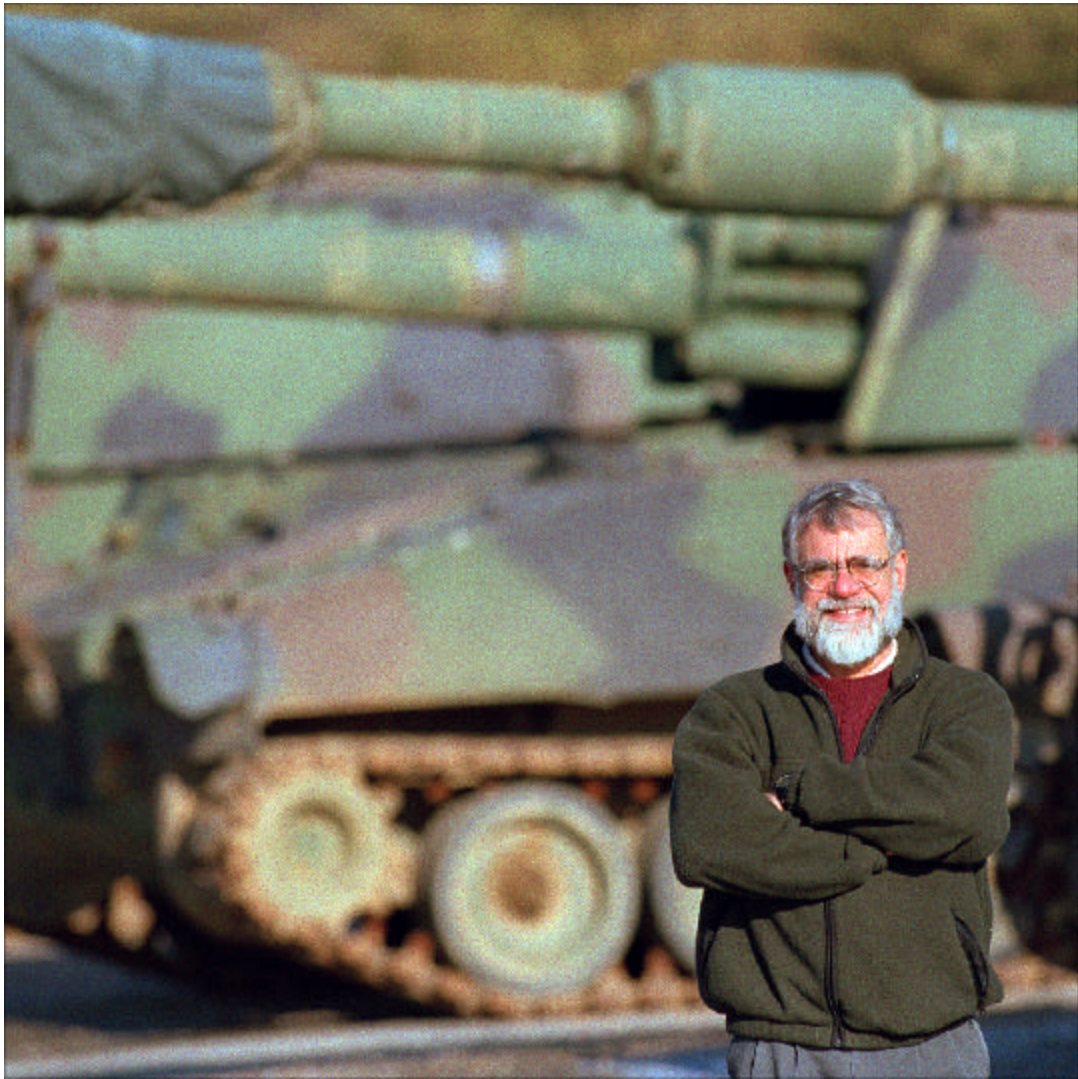
In 1997, EPA—in an unprecedented move—ordered the military to halt training activities on the base and investigate whether training was harming the environment. The study demonstrated that training was, in fact, damaging the Cape's aquifer, and EPA immediately ordered the military to undertake a major cleanup of contaminated soil, groundwater and unexploded ordnance. The orders were issued under emergency provisions of the Safe Drinking Water Act.

As a result of EPA's actions on the Cape, the Department of Defense is now looking seriously at the environmental impacts that firing ranges—encompassing 20 to 50 million acres nationwide—are having on groundwater supplies all across the country. The military is reconsidering its use of open burn and open detonation training activities.

For Feigenbaum, the end of the shell blasts and launching of the cleanup are an encouraging first step. "I'm very excited we've gotten this far," he said. "Now we want to make sure that the cleanup is completed."

The cleanup of the Cape Cod Aquifer is one of many strategies EPA is pursuing to make New England's drinking water supplies safer. While we're fortunate that 94 percent of the region's public water supply systems currently meet drinking water quality standards, drinking water safety cannot be taken for granted. The agency's tools include tough enforcement, technical and financial assistance to public water suppliers, and boosting public awareness.

In a major new effort, EPA will work with many partners to help small systems cope with new drinking water regulations for contaminants. EPA continues to support the requirement that all public water suppliers provide annual "Consumer Confidence Reports" to their customers, which explain where their water comes from and whether it complies with drinking water rules. EPA is also working with states to have all public water suppliers assess potential contamination threats to their drinking water supplies and take steps to protect them.



Joel Feigenbaum at the Massachusetts Military Reservation

Restoring Brownfields • Bridgeport, Connecticut

When Edith Diaz bought her house in 1994, Went Field Park in the west end of Bridgeport, CT was a no man's land. Open space that had once been used by P.T. Barnum to house his circus elephants was decrepit and rundown, a magnet for drug dealers and gangs.

Diaz and a group of neighbors in the Went Field Park Association made it their mission to bring the park back. In the late 1990s, they used EPA's Brownfields Program to learn about the technical aspects of site cleanups. Next, they tapped state and federal funds to get a major portion of the park cleaned up. Now the group is focusing on restoring two neighboring industrial sites, which will eventually be added to the park.

Diaz, a city employee, spends much of her time getting residents around the park involved in its improvement. When residents complain that they can't understand the jargon, she shows them videos. When residents are confused, she answers their questions.

As a result, the community has had a major role in shaping and designing what is now an eight-acre park that will include a playground, a soccer field, a football field and extensive open space for recreation. Diaz's dream is that the park will help galvanize a cleaner, safer neighborhood which, in turn, will also attract stores, shops and other businesses.

The success Diaz hopes to see can already be found two miles east in downtown Bridgeport, where the Ballpark at Harbor Yards is a shining example of Brownfields redevelopment. Ten years ago, the former Jenkins Valve Co. property was a blighted, polluted eyesore with no future prospects. A five-year collaboration between EPA, state, community and business leaders, turned this long-idle property into a new 5,500-seat baseball park, which employs nearly 200 residents. Construction of a new indoor arena is now underway next to the ballpark.

For Diaz, the turnaround she is seeing in Bridgeport is inspiring. "Everyone in the community is involved," she said. "It's helped bring the city together."

Throughout New England, abandoned industrial sites pose a huge challenge for cities and towns. Burdened by real and perceived contamination problems, Brownfield sites have long been spurned by developers who are fearful of exorbitant cleanup costs.

EPA's Brownfields Program is reversing this trend. Through grants, site evaluations and other assistance, EPA New England has helped clean up dozens of contaminated properties, resulting in thousands of new jobs and millions of dollars of tax revenues for municipal coffers. Such projects also help the region's rural areas, which are scrambling to preserve precious open space from new development.



Edith Diaz at Went Field Park

Reducing Our Footprint • Chelmsford, Massachusetts

EPA New England devotes substantial resources to helping companies, states, cities and even other federal agencies reduce their impacts on the environment.

Now, through a program called Tread Lightly, our own regional office is looking at its own environmental footprint and working to make it smaller. The centerpiece of our strategy is reducing energy consumption and waste generation—and tracking those improvements in terms of greenhouse gas emissions—at our Boston offices and our new laboratory/field office in Chelmsford.

Slated to open this spring, our 68,000-square-foot New England Regional Laboratory will be a showcase for environmental and energy-efficient technologies. Energy for the building will be derived entirely from off-site wind power and on-site solar power. Many of the building's lights will be powered by solar energy generated from dozens of photovoltaic awnings on building windows. The awnings also will block heat from the sun in summer. EPA is buying the wind power from the Green Mountain Power Corp., which supplies all-renewable electricity from its wind-powered turbines in Vermont. The state's utility restructuring law enabled EPA to buy the renewable power.

The laboratory will also include state-of-the-art systems for lighting, heating, cooling, plumbing and recycling. For heating, the building will use a batch of smaller boilers, which can be activated on an as-needed basis, rather than the traditional mega-boiler. All systems have been designed to expand as the use of the building expands, and to be recycled if the building is ever demolished.

Our regional office in Boston is aiming to reduce its carbon dioxide emissions by 20 percent by Earth Day 2002. To achieve this goal, we're setting increasingly stringent goals for the amount of electricity, heating and cooling we're using and the amount of waste we're generating.

Through a series of calculations, the reductions are converted to pounds of carbon dioxide, the most common greenhouse gas, so EPA can measure its own contribution to greenhouse gas emissions. In 1999, we realized a 7 percent reduction, keeping our goal on schedule. Our new recycling program has nearly tripled the amount of waste recycled from 24 percent to 67 percent.

Tread Lightly is EPA New England's effort to identify innovative and cost effective strategies that could help reduce greenhouse gas emissions by 30 percent by 2010, the goal set for all federal facilities.

We're also encouraging companies to reduce their own energy demands through our Energy Star Partnership program. Across New England, 730 companies have been recognized as Energy Star participants. Combined, they have saved more than \$1.9 billion in energy costs, while removing 76 million pounds of nitrogen oxide and 167 million pounds of sulfur dioxide from their emissions. Through the Energy Star program, these companies are getting the recognition they deserve while cutting costs and reducing their impact on the environment.



Wind farm turbines in Searsburg, Vermont

Restoring Urban Neighborhoods • Hartford, Connecticut

Interstate 84 is a big plus for suburban Hartford commuters, but it doesn't do much for the neighborhood of Parkville. "Since they put in the freeway in the '60s, it's really cut us off from the rest of the city," said Parkville resident Ruth Klue, of the multi-lane highway that literally casts a shadow over parts of the neighborhood.

Though just a couple miles west of downtown Hartford, traveling to and from Parkville is difficult. There are buses, of course, but they are slow with meandering routes. Using a car would be far quicker, but nearly half of Parkville's residents cannot afford cars.

Parkville's isolation is similar to many New England urban neighborhoods that have been largely abandoned in recent decades as business owners and home builders turned their attention to the suburbs.

Klue and her neighbors are trying to bring Parkville back to life—and it doesn't involve tearing down Interstate 84. They are teaming with state and federal agencies on projects aimed at revitalizing Parkville. The centerpiece is a unique 12-mile-long busway that will provide residents with quick and convenient transportation to downtown Hartford in the east and New Britain in the southwest. Modeled after light-rail service, the buses will travel unimpeded on an existing rail right-of-way. Slated to be up and running by 2004, the busway will include 12 station stops, including two in Parkville.

Klue, chairperson of a neighborhood committee, Picture It Better Together, has high hopes for the busway. She's excited about the prospect of new businesses springing up near the two transit stops. She also hopes the busway will draw more visitors to the neighborhood's many ethnic restaurants.

"This could be a real boon," Klue said. "It not only makes things more accessible for residents. It will also help businesses and buildings that are less full and in need of new blood."

Among New England's most daunting challenges is rejuvenating urban centers and reversing the spread of sprawl, which is devouring open space, clogging highways, worsening water pollution and eating away at the sense of community that helps define us as New Englanders.

EPA New England has taken a lead in tackling the sprawl issue. Our Brownfields and Urban Environmental Initiative programs are making cities more livable and economically vibrant. We've also launched a federal agency partnership that will identify smart growth solutions in such areas as Hartford. One of the outgrowths of that partnership is a coordinated approach to speed up the implementation of the busway through Parkville and help spur redevelopment in the neighborhood.



Ruth Klue at the site of future bus route

Eliminating Sewer Overflows • Manchester, New Hampshire

Terri de Langis was walking her dog around Dorrs Pond last year when it struck her that planting flowers would significantly enhance the pond at the northern edge of Manchester, N.H.

For years in the early part of this century, Dorrs Pond was a hugely popular swimming hole and recreation site at the end of a trolley line. Today, it shows the effects of 50 years of over-development and neglect.

From de Langis' passing thought on planting flowers, the Dorrs Pond Initiative was born. De Langis got together with a small group of residents and outlined goals for a cleaner, revitalized pond. In addition to planting flowers, the group is restoring trails, improving wheelchair access and making plans to offer the pond, with its rich colony of turtles, as an outdoor classroom for schools. Another group is working to improve the pond's water quality.

"Truly there is not a person who grew up here who hasn't a story or association or memory of this place," de Langis said.

The pond's transformation is being helped by a landmark agreement signed in 1999 by EPA New England, the state of New Hampshire and the city of Manchester. The agreement requires the city to tackle a major pollution problem in the Merrimack River—sewage and stormwater discharges that enter the river through antiquated storm pipes known as combined sewer overflows (CSOs). The discharges typically occur after rainstorms when the volume of stormwater and sewage going to the city's sewage treatment plant is more than the sewer system can handle.

EPA New England agreed Manchester could tackle the CSO problems in phases, as long as it funded \$5.6 million in other environmental improvements at the same time. The Dorrs Pond effort is just one piece of the package, a part of a \$1 million urban ponds restoration initiative focused on seven city ponds. The city also agreed to fund a \$2 million program to preserve wildlife areas and wetlands and a \$500,000 program to tackle childhood lead poisoning and asthma.

Sewage discharges from combined sewer overflow (CSO) pipes are a major problem and are a big reason why many of the nation's rivers remain unsafe for swimming and fishing. The problem is especially acute in New England, where more than 100 communities are burdened with CSO pipes that discharge untreated sewage and stormwater into waterways after heavy rains.

EPA New England recognizes the significant burden that CSO abatement projects pose for municipalities and is working with Manchester and other cities to develop cost effective plans that balance environmental benefits with affordability. Manchester recently finished the first of eight CSO separation projects it is required to undertake as part of its 1999 agreement with EPA and the NH Department of Environmental Services. The eight projects will eliminate about 124 million gallons of sewage that enters the Merrimack River each year.



Maxwell Pond is one of seven city ponds in Manchester's urban ponds restoration initiative

Restoring an Urban River • North Providence, Rhode Island

Joseph Vitullo has lived on the Woonasquatucket River for more than a half-century and he still remembers fondly his childhood days swimming, fishing and chasing after turtles. “We always had wildlife in there,” said the 65-year-old North Providence resident.

Those were the good old days. The river that was once Vitullo’s playground is now marked off with “No Swimming” and “Do Not Eat the Fish” signs. The warnings stem from dioxin contamination and other pollution in the Woonasquatucket, a heavily urbanized river that flows 18 miles from Smithfield to Providence.

“Ducks and the swans still come back, but it’s not like it used to be,” Vitullo said, adding sadly, “We don’t really use it anymore.” EPA and a host of partners are trying to change that. Designated recently as an American Heritage River, the Woonasquatucket is the target of a top-to-bottom turn-around aimed at improving its water quality and its shorelines.

Dioxin is the most immediate challenge. Widespread contamination has been found in and along the river in North Providence—so much, in fact, that the area was added last year to EPA’s Superfund list. EPA and its community partners have moved quickly to prevent the dioxin from spreading, restore contaminated floodplain areas and warn Rhode Islanders not to eat fish from the river.

The Woonasquatucket’s shoreline is also being revitalized, particularly in downtown Providence, where the river is the centerpiece for the nationally acclaimed Waterfire shows. The lower river has also been targeted for a 4.4 mile-long “Greenway” bike path connecting downtown Providence with Johnston. One section of the bike path will pass through the former Riverside Mills property that is now being addressed under EPA’s Brownfields Program.

For Vitullo, the cleanup and shoreline improvements give new hope to his dream that his grandchildren will eventually be able to play in the Woonasquatucket as he did. “Restore it back to what it was—that’s what I’m hoping for,” he said.

EPA’s involvement in the Woonasquatucket River is a result of the agency’s Urban Environmental Initiative (UEI) which was launched in 1995. The program was prompted by a recognition that New England cities are exposed to a disproportionate share of environmental and public health hazards, ranging from asthma and lead poisoning to air toxics and contaminated industrial sites. With strong public involvement as its foundation, the program’s goal is to help communities build their capacity for solving their own environmental problems. Since its inception, the program has focused on New England’s largest cities—Providence, Boston and Hartford.



Joseph Vitullo on the Woonasquatucket

Nonpoint Source Pollution • Lake Champlain, Vermont

Virginia Rasch loves canoeing around Bliss Pond—and it isn't just for the beauty and solitude. She also derives great pleasure collecting water samples, knowing it is helping to protect the pond's fragile ecosystem.

Rasch, of Calais, VT, is one of more than 50 volunteer lake monitors for the Lake Champlain Basin Program. Rain or shine, these hearty pond watchers paddle to their monitoring stations each and every week of the summer to measure water clarity, pH, temperature and other water quality indicators.

Rasch's decision to become a volunteer monitor was prompted by a sense of love and stewardship. "I knew there were environmental problems," Rasch said, referring to the 46-acre pond near her home that is plagued by algae bloom problems caused by aging septic systems. "I also believe in being responsible for the place where you live."

The Lake Champlain Basin is a hugely rich biological resource—a resource, however, that is under siege. Nutrient-rich discharges from sewage treatment plants and nonpoint sources—farm lands, lawns, septic systems and road runoff, among others—act to 'fertilize' water bodies. This, in turn, causes unwanted algae blooms and other vegetative growth which eventually causes oxygen depletion.

In addition to providing water quality information, volunteer monitors galvanize the public to reduce pollution. "They serve as a springboard for more action-oriented projects like watershed surveys and shoreline restoration work," said Amy Picotte, a Vermont Department of Environmental Conservation employee who coordinates the volunteers.

The Lake Champlain Basin Program—a collaboration of agencies, communities and private organizations—has 20-year reduction targets for curbing nutrient-rich discharges, specifically phosphorus, into Lake Champlain. By the end of this year, the program expects it will have reduced phosphorus loadings by 38 tons a year—more than double what the program was looking to achieve in the first five years.

Nonpoint source pollution accounts for about 80 percent of the pollution entering New England waters, making it one of EPA's biggest water quality protection challenges.

In the early 1990s, the University of Connecticut Cooperative Extension, in partnership with EPA New England and other agencies, created the "Nonpoint Education for Municipal Officials (NEMO)" project.

Founded on the principles that water quality is a function of land use and that land use is locally controlled, NEMO uses mapping technology and other visual aids to provide decision makers with the information necessary to better protect their local water resources. Many communities in Vermont and elsewhere in the region have followed NEMO guidelines to reduce paved surfaces associated with new development, require "best management practices," and create open space plans to protect sensitive areas. This program has been so well received nationally that over 30 states have adopted similar programs, including Massachusetts, Maine and New Hampshire.



Kyakers on Lake Champlain

Going Beyond Compliance • Jay, Maine

The International Paper Co.'s biggest claim to fame is that they make the glossy paper used for printing Forbes Magazine and L.L. Bean catalogues. In environmental circles, the Jay, Maine paper mill is heralded for its success in combining environmental stewardship with a healthy corporate bottom line.

International Paper is a model for developing systems that are more environmentally stringent than are required by federal standards. It is an example of how companies can collaborate with EPA on projects that help both the environment and their operating costs.

"Environmental leadership means creative thinking," says Steve Groves, manager of environment, health and safety at IP's Jay facility, which makes 1,500 tons of paper a day.

With 1,200 employees, IP's Androscoggin Mill is a self-contained city. Its wood yard, utilities, pulping, bleaching and paper making operations are regulated by the federal government, state of Maine and town of Jay.

Since joining EPA New England's Environmental Leadership and StarTrack Programs in the late 1990s, the company has slashed mercury discharges by 80 percent and reduced dioxin emissions to non-detectable levels. The mill has also begun reusing all of its solid waste, which will end the need for a landfill, and cut hazardous wastes from 80,000 pounds a day to 220 pounds a day.

Now, the company is working to discharge even cleaner wastewater into the Androscoggin River. EPA is assisting through its Project XL, a program that allows companies to experiment with new regulatory schemes that can achieve better environmental results.

"We want to continue to be an environmental leader because it's good for business, good for the environment and good for our neighbors," says mill manager Michael Craft.

EPA New England has found that creative alternatives to traditional regulatory approaches can often yield far better environmental results at less cost.

International Paper was one of the first participants in the region's StarTrack Program, a program that recognizes and rewards companies and agencies that demonstrate a commitment to superior environmental performance. In exchange for going above and beyond what environmental laws require, StarTrack participants receive more flexibility and latitude in how they are regulated.

StarTrack has been so successful that it was recently folded into a new national voluntary compliance program launched by EPA last fall. International Paper was among 30 New England facilities named as charter members to the new National Environmental Achievement Track program.



View across the Androscoggin River of the International Paper mill

Contacts

This report is on our website at www.epa.gov/region1, and includes various links to programs and projects in the report.

EPA New England's Customer Service
888-EPA-REG1 (888-372-7341)

Emergency Response
(reporting spills/environmental incidents)
800-424-8802

Criminal Investigations Division
617-918-2300

EPA New England Library
888-EPA-LIBR (888-372-5427)

Additional Sources of Information
National Lead Information Center
800-424-LEAD(5323)

Children First Initiative: Alice Kaufman, EPA New England
617-918-1064

New England Lead Coordinating Committee
"Keep it Clean-Lead Safe Renovation Campaign"
617-636-2431

No Discharge Areas: Ann Rodney, EPA New England
617-918-1538

Lake Champlain Basin Program: www.lcbp.org
802-655-6382 (NY & VT: 800-468-5227)

Lake Champlain: Erik Beck, EPA New England
617-918-1606

Air Risk Information Support Center (Air RISC)
Hotline 919-541-0888

EPA Tribal Program: Valerie Ferry, EPA New England
617-918-1674

Acknowledgments

New England Environmental Challenges 2001
is published by:
U.S. Environmental Protection Agency
New England
1 Congress St., Suite 1100
Boston, MA 02114-2023

Project Coordinators
Peyton Fleming, Maureen Hilton, Amy Miller and
Diane Switzer

Writer
Barbara Donnelly

Graphic Design
Liz Pucci

Photograph Credits
Roy Crystal (pages 5, 9, 11, 13, 25)
University of Maine at Farmington Archaeology Research
Center (page 7)
Matt Suess (page 15)
Paul Shoul (pages 17, 21)
Vermont Environmental Research Associates (page 19)
Cyndy Carlson (page 23)
Alden Pellett (page 27)
Steve Groves (page 29)

Special Thanks
Larry Constantine, Terri de Langis, Edith Diaz,
Lucy Edmondson, Joel Feigenbaum, Wayne Ganim,
Steve Groves, Edward Ketchen, Katrina Kipp, Ruth Klue,
Amy Picotte, Virginia Rasch, Matt Schweisberg,
Donald Soctomah, Martha Staskus, Elnora Thompson,
Joseph Vitullo and Deborah Wyatt